

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

IN THE APPLICATION OF:

JAMES EDMOND VAN TRUMP

CASE NO.: CL2121USNA

APPLICATION NO.: 10/719607

CONFIRMATION NO.: 3125

GROUP ART UNIT: 1732

EXAMINER: LEO B. TENTONI

FILED: NOVEMBER 21, 2003

FOR: PROCESS FOR PREPARING BICOMPONENT FIBERS HAVING LATENT
CRIMP

APPEAL BRIEF PURSUANT TO 37 C.F.R. §41.37

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Attention: Mail Stop Appeal Brief - Patents

Sir:

This is an appeal to the Board of Appeals from a Final Office Action mailed September 19, 2006 and a subsequent Advisory Action mailed November 29, 2006, in which the Examiner finally rejected claims 1-8 of the above-identified application. Appellant timely filed a Notice of Appeal on December 8, 2006 via facsimile. Therefore, the due date for filing the Appeal Brief is February 8, 2007. This brief is being filed in support of that Notice of Appeal.

As required by 37 C.F.R. §41.37, a single copy of this brief is being filed with the filing fee of \$500.00. Please charge the fee to Deposit Account No. 50-3223.

1. REAL PARTY IN INTEREST

The real party in interest in the present appeal is Invista North America S.à r.l., a *société à responsabilité limitée*, incorporated under the laws of Luxembourg, having acquired rights from E.I. DuPont De Nemours and Company by way of an assignment recorded in the United States Patent and Trademark Office at Reel 015286, Frame 0708, having acquired rights from the inventor by way of an assignment recorded in the United States Patent and Trademark Office at Reel 014581, Frame 0026.

2. RELATED APPEALS AND INTERFERENCES

No related appeals or interferences are known to the Appellant or to Appellant's legal representative which will directly affect or be directly affected by or have bearing on the Board's decision in this appeal.

3. STATUS OF THE CLAIMS

Claims 1-8 are currently pending in the application. Claims 1-8 stand finally rejected. The rejections of Claims 1-8 are being appealed.

4. STATUS OF AMENDMENTS

No amendments have been made to the claims subsequent to the final rejection.

5. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention provides a method for preparing a polyester bicomponent fiber such that the latent shrinkage of the fiber is maximized. The method includes combining at least two crystallizable polyester polymers, melting the polyester polymers, causing the molten polymers to flow through a spinneret having one or more apertures, where the spinneret is suitable for preparing bicomponent fibers, and spinning at least one strand of 0.5 to 6 denier fiber said strand being spun at a linear rate of $\pm 10\%$ of the maximum shrinkage spinning rate, where the two crystallizable polyester polymers differ from one another in crystallization rate under the spinning conditions. Specification p. 1, line 32 to p. 2, line 4.

The method is conducted by preparing the fiber at a linear rate of $\pm 10\%$ the maximum shrinkage spinning rate (MSSR). As stated in the specification at page 5, lines 3-5, it was not previously known that an MSSR existed. The method includes first determining the MSSR by measuring, analyzing, and considering several factors such as the ratio of crystallization rates of the two polymers, the absolute magnitude of the crystallization rate of the faster-to-crystallize component, the thickness or denier of the fiber being produced, the spinning

temperature, and the type of quench imposed on the moving fiber line. This method is described in the examples at p. 7, line 7 to p. 13, line 14.

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The issues on appeal include:

- I. Are claims 1, 2, and 4-8 anticipated under 35 U.S.C. §102(b) by EP 1 059 372 to Ochi et al. ("Ochi")?
- II. Are claims 1, 2, and 4-8 anticipated under 35 U.S.C. §102(e) by U.S. Patent Application Publication No. 2003/0052436 to Koyanagi et al. ("Koyanagi")?
- III. Are claims 1, 2, and 4-8 anticipated under 35 U.S.C. §102(e) by U.S. Patent Application Publication No. 2002/0025433 to Chang et al. ("Chang")?
- IV. Are claims 1-8 obvious under 35 U.S.C. §103(a) over any one of Ochi, Koyanagi, and Chang, individually?

7. ARGUMENTS

- I. Claims 1, 2, and 4-8 are not anticipated by Ochi.

Claims 1, 2, and 4-8 have been rejected under 35 U.S.C. §102(b) as anticipated by Ochi. Appellants respectfully traverse this rejection on the grounds that Ochi fails to disclose, teach or suggest every element of the present claims. Specifically, Ochi fails to disclose the maximum shrinkage spinning rate (MSSR) and fails to disclose a step of determining the MSSR.

The Examiner has asserted not only that the maximum shrinkage spinning rate (MSSR) was an inherent property of a bicomponent fiber as in Ochi, but also that the step of determining the MSSR is inherent. The Appellant points out that since it was not previously known that an MSSR existed, not only was a determination of MSSR not inherent in the cited references, but a determination of MSSR was, in fact, not performed.

It was not previously known that an MSSR existed. The recognition of a previously unknown result-effective variable is itself an indication that methods of calculating that variable are not inherent and also not obvious. The present invention provides a method for preparing fiber such that the latent shrinkage of the fiber is maximized. The method is conducted by preparing the fiber at the MSSR, by first determining the MSSR which includes analyzing and considering several factors such as the ratio of crystallization rates of the two

polymers, the absolute magnitude of the crystallization rate of the faster-to-crystallize component, the thickness or denier of the fiber being produced, the spinning temperature, and the type of quench imposed on the moving fiber line.

Claim 1 includes a step for determining the maximum shrinkage spinning rate (MSSR) of the polymers to be combined in a bicomponent fiber. The Appellant has discovered that when preparing bicomponent fibers from polymers which differ in crystallization rates, a higher degree of latent shrinkage of the fiber may be achieved when the spinning speed varies only by $\pm 10\%$ from the MSSR. Determining the MSSR prior to spinning the fiber is essential to ensure maximization of the degree of latent shrinkage of the fiber.

As previously stated, Ochi does not disclose, teach or suggest that the latent shrinkage of the bicomponent fiber may be maximized by first determining the MSSR. Further, Ochi fails to teach or suggest how the MSSR may be determined or what factors may be considered in the determination. Therefore, Ochi fails to anticipate the present claims.

In order for any reference to anticipate a claim, all elements of the claim must either be disclosed by or inherent in the reference. As mentioned above, the Examiner has asserted that the step of determining the MSSR was inherent in the references.

The standard of inherency is very clear. "Inherency...may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *In re Oelrich*, 666 F.2d 578, 581 (CCPA 1981). [citations omitted]. In other words, the element that is asserted to be inherent must necessarily and inevitably be present in the disclosure.

Applicant recognizes that the "mere recitation of a newly discovered function or property, inherently possessed by the things in the prior art, does not distinguish a claim drawn to those things from the prior art." *Id.* However, the present claims do not merely recite the newly discovered property, which is the existence of the MSSR. To the contrary, the present claims require the step of determining the MSSR. The application provides suitable methods of determining the MSSR are set forth in the examples.

The step of determining the MSSR is new and would not have been obvious in view of the cited references considering that the existence of the MSSR was not previously known.

The Examiner is contending that the step of determining the MSSR was inherent even though the reference itself does not disclose the MSSR. Furthermore, the reason that the reference does not disclose MSSR is because it was not known that an MSSR existed. It does not logically follow that if a property was unknown, the step of determining the unknown property could have been inherent. Therefore, it is clear that the step of determining the MSSR was not inherent in the Ochi. As such, Ochi fails to anticipate the present invention by failing to disclose every element of the present claims. Accordingly, reconsideration and withdrawal of the rejections under Section 102 are appropriate and respectfully requested.

II. Claims 1, 2, and 4-8 are not anticipated by Koyanagi.

Claims 1, 2, and 4-8 have been rejected under 35 U.S.C. §102(e) as anticipated by Koyanagi. This rejection is respectfully traversed. Similarly to Ochi, Koyanagi fails to disclose, teach or suggest a step of determining the maximum shrinkage spinning rate (MSSR).

As was discussed above with respect to Ochi, Koyanagi is similarly deficient. Koyanagi did not disclose a step of determining the MSSR, because the MSSR was not known to exist. Koyanagi fails as a property anticipatory reference for failing to disclose every element of the present claims. Therefore, reconsideration and withdrawal of the rejections in view of Koyanagi are appropriate and respectfully requested.

III. Claims 1, 2, and 4-8 are not anticipated by Chang.

Claims 1, 2, and 4-8 have been rejected under 35 U.S.C. §102(e) as anticipated by Chang. This rejection is respectfully traversed. Similarly to Ochi, Chang fails to disclose, teach or suggest a step of determining the maximum shrinkage spinning rate (MSSR).

As was discussed above with respect to Ochi, Chang is similarly deficient. Chang did not disclose a step of determining the MSSR, because the MSSR was not known to exist. Chang fails as a property anticipatory reference for failing to disclose every element of the present claims. Therefore, reconsideration and withdrawal of the rejections in view of Chang are appropriate and respectfully requested.

IV. Claims 1-8 are not obvious over any one of Ochi, Koyanagi, and Chang, individually.

Claims 1-8 have also been rejected under 35 U.S.C. §103(a) as obvious in view of any one of Ochi, Koyanagi, and Chang, individually. This rejection is respectfully traversed on the grounds that the Examiner has failed to establish a *prima facie* case of obviousness.

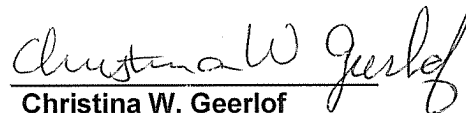
In order to establish a *prima facie* case of obviousness, a reference or combination of references must disclose, teach or suggest every element of the present claims. Each of Ochi, Koyanagi and Chang fails to disclose, teach or suggest a method for determining the MSSR. No single reference or combination of references discloses, teaches, or suggests all elements of the present claims, the references each fail to establish a *prima facie* case of obviousness.

CONCLUSION

In view of the remarks set forth above, reconsideration and withdrawal of the rejections are appropriate and respectfully requested. Appellant submits that the present claims are patentably distinct over the art and in allowable form. Early allowance is, therefore, solicited. If the Examiner has any questions regarding this Appeal Brief, the Examiner is invited to contact the undersigned attorney.

Date: 7-2-07

Respectfully submitted,



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8. CLAIMS APPENDIX

1. (previously presented) A process for preparing polyester bicomponent fibers the process comprising combining at least two crystallizable polyester polymers, determining a maximum shrinkage spinning rate of said polymers, melting said polyester polymers, causing said molten polymers to flow through a spinneret having one or more apertures, said spinneret being suitable for preparing bicomponent fibers, thereby spinning at least one strand of 0.5 to 6 denier fiber said strand being spun at a linear rate of $\pm 10\%$ of the maximum shrinkage spinning rate, said two crystallizable polyester polymers differing from one another in crystallization rate under the spinning conditions.

2. (original) The process of Claim 1 wherein the at least two crystallizable polyester polymers are selected from the group consisting of polyethylene terephthalate, polypropylene terephthalate, and polybutylene terephthalate.

3. (original) The process of Claim 2 wherein one crystallizable polyester polymer is polyethylene terephthalate, and another crystallizable polyester polymer is polypropylene terephthalate.

4. (original) The process of Claim 2 or Claim 3 wherein the weight ratio of the two polyesters in the bicomponent fibers made by the process of the invention is in the range of 30/70-70/30.

5. (original) The process of Claim 2 or Claim 3 wherein the weight ratio of the two polyesters in the bicomponent fibers made by the process of the invention is in the range of 40/60-60/40.

6. (original) The process of Claim 2 or Claim 3 wherein the weight ratio of the two polyesters in the bicomponent fibers made by the process of the invention is in the range of 45/55-55/45.

7. (original) The process of Claims 1, 2, or 3 wherein the at least two crystallizable polyester polymers differ in intrinsic viscosity.

8. (original) The process of Claim 1 or Claim 3 further comprising the step of heating the thus prepared polyester bicomponent to a temperature above the glass-transition temperature of the less crystallized component to effect shrinkage and crimping of said fiber.

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9. (canceled)

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9. EVIDENCE APPENDIX

No additional evidence was submitted in this application including evidence pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132.

10. RELATED PROCEEDINGS APPENDIX

No related appeals or interferences are known to Appellant or Appellants' legal representative which will directly affect or be directly affected by or have bearing on the Board's decision in this appeal.